REMARKS/ARGUMENTS

Claims 1-2, 6-10, and 12-20 are pending. Claims 1, 9, and 17 have been amended. Claims 3, 4, 11, and 21-30 have been canceled. Claims 6, 8, 14, 16, and 20 are withdrawn. No new matter has been added to the amended claims.

Claim Rejections - 35 U.S.C. § 112

Claim 21 stands rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. To expedite prosecution, claim 21 has been canceled.

Claim Rejections - 35 U.S.C. § 103

Claims 1, 2, 5, 7, 9, 10, 12, 13, 15, 17-19, and 21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McKnight (US 6,144,353) in view of Bonnett et al. (US 6,075,506). Applicants respectfully traverse this rejection.

Claim 1 recites "applying a single transition voltage to the plurality of pixel elements on the display during a first period of time within a first field time, wherein the single transition voltage modifies a voltage between the plurality of pixel elements and ground and induces liquid crystal material in each pixel element to begin a transition from a dark state to a bright state" among other elements. Applicants respectfully submit that neither the primary reference nor the secondary reference, either taken alone or in combination, teach or suggest at least these claim elements.

McKnight discusses a display system in which a display is quickly driven dark and held dark for a period of time. While the display is held in a state in which display data is not visible, the pixel electrodes are painted with paint voltages. (McKnight at col. 10, lines 8-19). In order to accomplish these separate tasks, McKnight utilizes separate electrical control drivers: electrode control driver 110 as illustrated in FIG. 2A to drive the display dark; and pixel driver logic 102 as illustrated in FIG. 2A to subsequently load the pixel data on the pixel electrodes.

McKnight makes a clear distinction between modifying the voltage between the cover glass electrode and ground and modifying the voltage between the pixel electrodes and

ground. In order to drive the display dark, McKnight modifies the voltage between the cover glass electrode and ground. (McKnight at col. 10, lines 8-14). Control of the voltage between the cover glass electrode and ground is used to darken the display, "even in pixel data is still stored on the pixel electrodes." (McKnight, FIG. 3A, reference number 204). Only after modifying the voltage between the cover glass electrode and ground does McKnight modify the voltage between the pixel electrode and ground in order to load pixel display data onto the pixel electrodes. (McKnight at col. 10, lines 14-19).

In contrast with McKnight, claim 1 recites, in part, applying a single transition voltage that "modifies a voltage between the plurality of pixel elements and ground." As described throughout the specification, during a "clear time 200, a transition optimized voltage is supplied to each of the pixels in the LCD to 'initialize' the pixels." (Specification at paragraph [0033]). Thus, in contrast with McKnight, in which the voltage between the cover glass electrode and ground is modified to darken the display despite the voltages between the pixel electrodes and ground, embodiments of the present invention modify the voltage between the pixel electrodes and ground to initialize the pixels. Thus, McKnight does not teach or suggest at least these claim elements. Furthermore, Bonnett et al. does not make up for these deficiencies in McKnight. For at least these reasons, claim 1 is in condition for allowance.

Claims 2, 5, and 7, which depend from claim 1, are in condition for allowance, for at least the reasons discussed in relation to claim 1, as well as for the additional elements they recite.

Claim 9 recites "a transaction circuit coupled to each pixel element in the plurality of pixel elements, the transaction circuit configured to apply a first transition voltage to the plurality of pixel elements during a first time period within a first field time," "wherein the first transition voltage modifies a voltage between each pixel element and ground and induces liquid crystal material in each pixel element to begin the slow transition to the second state within the first field time" among other elements. As discussed in relation to claim 1, neither of the cited references, either taken alone or in combination, teach or suggest at least these claim elements. For at least these reasons, claim 9 is in condition for allowance.

Claims 10, 12, 13, and 15, which depend from claim 9, are in condition for allowance, for at least the reasons discussed in relation to claim 9, as well as for the additional elements they recite.

Claim 17 recites "an initializing circuit coupled to the plurality of pixels configured to apply a first voltage to the plurality of pixels during a first time period of a first field, wherein the first voltage modifies a potential difference between the plurality of pixels and ground and induces liquid crystal material in the plurality of pixels to begin transitioning to a bright state" among other elements. As discussed in relation to claims 1 and 9, neither of the cited references, either taken alone or in combination, teach or suggest at least these claim elements. For at least these reasons, claim 17 is in condition for allowance.

Claims 18-19, which depend from claim 17, are in condition for allowance, for at least the reasons discussed in relation to claim 17, as well as for the additional elements they recite.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,

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